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Amendment in Reply to Office action of June 26, 2003
Replacement Sheet

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Fig. 1A

(SEQ ID NO:1-nucleotide sequence and SEQ ID NO:2-amino acid sequence)

Escherichia coli B Phytase Sequence

1

ATG AAA GCG ATC TTA ATC CCA TTT TTA TCT CTT CTG ATT CCG
TTA ACC CCG
Met Lys Ala Ile Leu Ile Pro Phe Leu Ser Leu Leu Ile Pro
Leu Thr Pro

CAA TCT GCA TTC GCT CAG AGT GAG CCG GAG CTG AAG CTG GAA
AGT GTG GTG
Gln Ser Ala Phe Ala Gln Ser Glu Pro Glu Leu Lys Leu Glu
Ser Val Val

ATT GTC AGT CGT CAT GGT GTG CGT GCT CCA ACC AAG GCC ACG
CAA CTG ATG
Ile Val Ser Arg His Gly Val Arg Ala Pro Thr Lys Ala Thr
Gln Leu Met

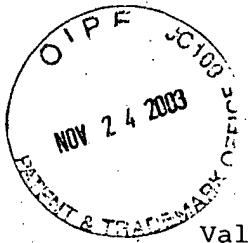
CAG GAT GTC ACC CCA GAC GCA TGG CCA ACC TGG CCG GTA AAA
CTG GGT TGG
Gln Asp Val Thr Pro Asp Ala Trp Pro Thr Trp Pro Val Lys
Leu Gly Trp

CTG ACA CCG CGN GGT GGT GAG CTA ATC GCC TAT CTC GGA CAT
TAC CAA CGC
Leu Thr Pro Arg Gly Gly Glu Leu Ile Ala Tyr Leu Gly His
Tyr Gln Arg

CAG CGT CTG GTA GCC GAC GGA TTG CTG GCG AAA AAG GGC TGC
CCG CAG TCT
Gln Arg Leu Val Ala Asp Gly Leu Leu Ala Lys Lys Gly Cys
Pro Gln Ser

GGT CAG GTC GCG ATT ATT GCT GAT GTC GAC GAG CGT ACC CGT
AAA ACA GGC
Gly Gln Val Ala Ile Ile Ala Asp Val Asp Glu Arg Thr Arg
Lys Thr Gly

GAA GCC TTC GCC GCC GGG CTG GCA CCT GAC TGT GCA ATA ACC
GTA CAT ACC



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Fig. 1B

Glu Ala Phe Ala Ala Gly Leu Ala Pro Asp Cys Ala Ile Thr
Val His Thr

CAG GCA GAT ACG TCC AGT CCC GAT CCG TTA TTT AAT CCT CTA
AAA ACT GGC

Gln Ala Asp Thr Ser Ser Pro Asp Pro Leu Phe Asn Pro Leu
Lys Thr Gly

GTT TGC CAA CTG GAT AAC GCG AAC GTG ACT GAC GCG ATC CTC
AGC AGG GCA

Val Cys Gln Leu Asp Asn Ala Asn Val Thr Asp Ala Ile Leu
Ser Arg Ala

GGA GGG TCA ATT GCT GAC TTT ACC GGG CAT CGG CAA ACG GCG
TTT CGC GAA

Gly Gly Ser Ile Ala Asp Phe Thr Gly His Arg Gln Thr Ala
Phe Arg Glu

CTG GAA CGG GTG CTT AAT TTT CCG CAA TCA AAC TTG TGC CTT
AAA CGT GAG

Leu Glu Arg Val Leu Asn Phe Pro Gln Ser Asn Leu Cys Leu
Lys Arg Glu

AAA CAG GAC GAA AGC TGT TCA TTA ACG CAG GCA TTA CCA TCG
GAA CTC AAG

Lys Gln Asp Glu Ser Cys Ser Leu Thr Gln Ala Leu Pro Ser
Glu Leu Lys

GTG AGC GCC GAC AAT GTC TCA TTA ACC GGT GCG GTA AGC CTC
GCA TCA ATG

Val Ser Ala Asp Asn Val Ser Leu Thr Gly Ala Val Ser Leu
Ala Ser Met

CTG ACG GAG ATA TTT CTC CTG CAA CAA GCA CAG GGA ATG CCG
GAG CCG GGG

Leu Thr Glu Ile Phe Leu Leu Gln Gln Ala Gln Gly Met Pro
Glu Pro Gly

TGG GGA AGG ATC ACC GAT TCA CAC CAG TGG AAC ACC TTG CTA
AGT TTG CAT

Trp Gly Arg Ile Thr Asp Ser His Gln Trp Asn Thr Leu Leu
Ser Leu His

AAC GCG CAA TTT TAT TTG CTA CAA CGC ACG CCA GAG GTT GCC
CGC AGC CGC

Asn Ala Gln Phe Tyr Leu Leu Gln Arg Thr Pro Glu Val Ala
Arg Ser Arg



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Fig. 1C

GCC ACC CCG TTA TTG GAT TTG ATC ATG GCA GCG TTG ACG CCC
CAT CCA CCG
Ala Thr Pro Leu Leu Asp Leu Ile Met Ala Ala Leu Thr Pro
His Pro Pro

CAA AAA CAG GCG TAT GGT GTG ACA TTA CCC ACT TCA GTA CTG
TTT ATT GCC
Gln Lys Gln Ala Tyr Gly Val Thr Leu Pro Thr Ser Val Leu
Phe Ile Ala

GGA CAC GAT ACT AAT CTG GCA AAT CTC GGC GGC GCA CTG GAG
CTC AAC TGG
Gly His Asp Thr Asn Leu Ala Asn Leu Gly Gly Ala Leu Glu
Leu Asn Trp

ACG CTT CCC GGT CAG CCG GAT AAC ACG CCG CCA GGT GGT GAA
CTG GTG TTT
Thr Leu Pro Gly Gln Pro Asp Asn Thr Pro Pro Gly Gly Glu
Leu Val Phe

GAA CGC TGG CGT CGG CTA AGC GAT AAC AGC CAG TGG ATT CAG
GTT TCG CTG
Glu Arg Trp Arg Arg Leu Ser Asp Asn Ser Gln Trp Ile Gln
Val Ser Leu

GTC TTC CAG ACT TTA CAG CAG ATG CGT GAT AAA ACG CCG CTG
TCA TTA AAT
Val Phe Gln Thr Leu Gln Gln Met Arg Asp Lys Thr Pro Leu
Ser Leu Asn

ACG CCG CCC GGA GAG GTG AAA CTG ACC CTG GCA GGA TGT GAA
GAG CGA AAT
Thr Pro Pro Gly Glu Val Lys Leu Thr Leu Ala Gly Cys Glu
Glu Arg Asn

GCG CAG GGC ATG TGT TCG TTG GCA GGT TTT ACG CAA ATC GTG
AAT GAA GCA
Ala Gln Gly Met Cys Ser Leu Ala Gly Phe Thr Gln Ile Val
Asn Glu Ala

CGC ATA CCG GCG TGC AGT TTG AGA TCT CAT CAC CAT CAC CAT
CAC TAA 1323
Arg Ile Pro Ala Cys Ser Leu Arg Ser His His His His
His End